
Antidegradation

Water Quality Standards

- Defines water quality goals of a water body
- This is accomplished by:
  - Designating the use or uses of the water (aquatic, recreational, etc.)
  - Setting criteria necessary to protect the uses
  - Preventing degradation of water quality

What is Antidegradation?

- Antidegradation refers to federal regulations designed to maintain and protect existing water quality and high quality waters from unnecessary pollution

Applicability

- Antidegradation applies to any permitting action regarding a regulated discharge of a new or increased amount of a pollutant of concern

Origins

- Basic policy was est. in 1968 by U.S. Dept. of the Interior
- Promulgated in CFR in 1983
  - 40 CFR 131.12
- No explicit requirement for antidegradation in CWA
  - Consistent with spirit and intent of the act
  - "...restore and maintain the chemical, physical and biological integrity of the Nation's waters"

Degradation defined

- A decline in the chemical, physical, or biological conditions of a surface water as measured on a pollutant-by-pollutant basis
- Increase in any pollutant concentration or mass loading
- Focus on “Pollutants of Concern”

Tiers of Anti-deg

- Tier 1 – Maintain uses
  - Can increase pollutant concentration up to the WQS
- Tier 2 – Maintain existing quality
  - Higher quality waters
    - Concentration of pollutants are substantially below the water quality limit needed to protect the use

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- Tier 2 ½ – Outstanding Iowa Waters
  - Unique Waters
  - Degradation allowed only under very limited conditions
- Tier 3 – Outstanding National Resource Waters
  - Unique Waters
  - Degradation allowed only under very limited conditions

Tiers of Anti-deg

- Tier 2
  - Try to protect existing higher quality condition
  - Degradation allowed only if it is "***necessary*** to accommodate ***important*** economic or social development"
    - No reasonable alternative to degradation
    - Noteworthy social or economical benefits
    - Existing uses are protected

Tier 2 Example:

Stream: **Otter Creek**

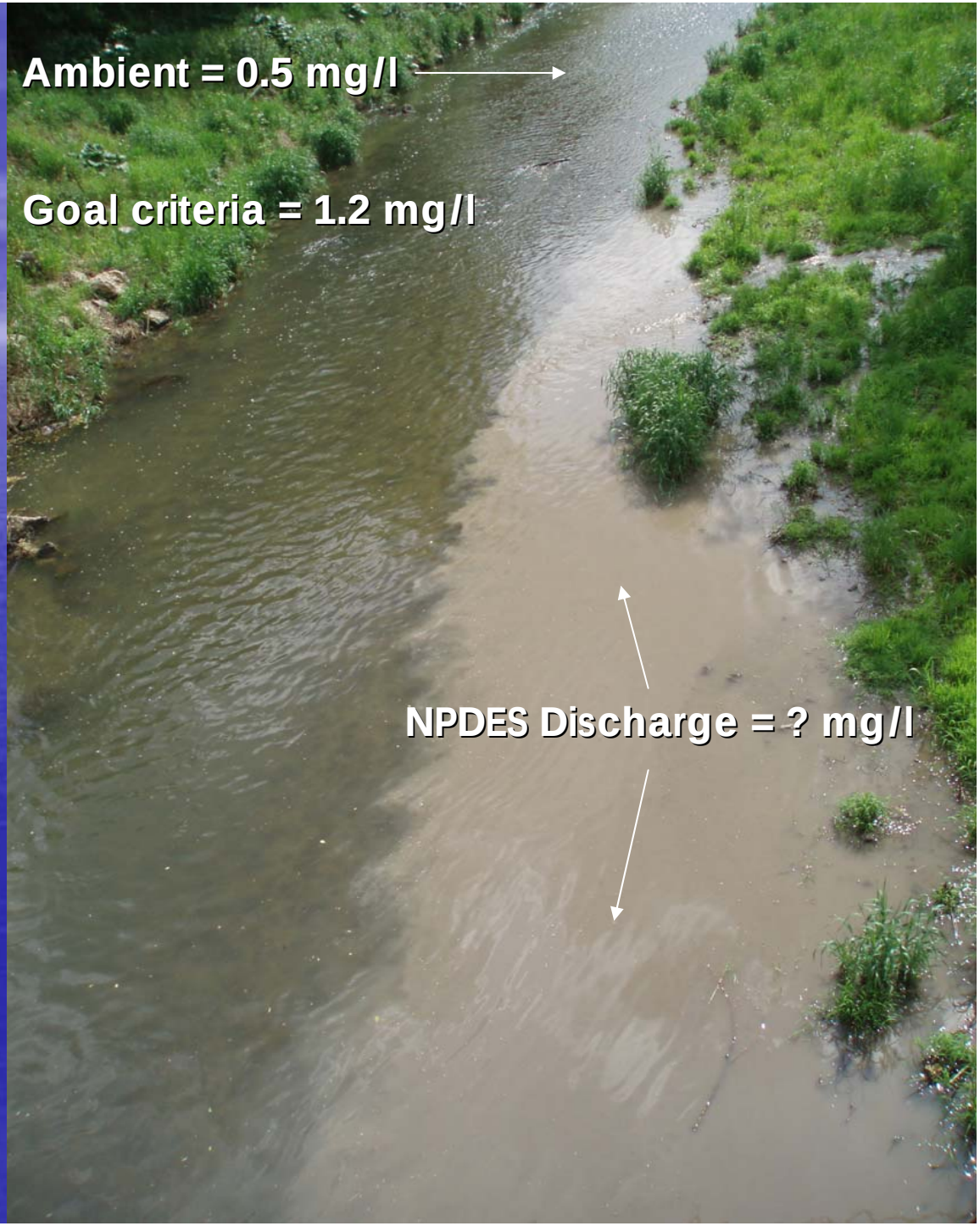
Class: **B(WW-2)**

Parameter: **Zinc**

Criteria to protect aquatic life: **1.2 mg/l**

Ambient condition: **0.5 mg/l**

Water quality is better than necessary to protect use



Tiers of Anti-deg

- Tier 2 ½ - Outstanding Iowa Waters
  - Some waters may not have national significance, but are outstanding within Iowa
  - Water body by water body approach
  - This tier affords more protection than Tier 2
  - Allows some flexibility not afforded in Tier 3
  - Old HQ waters will transfer to OIW


Trout Run - Decorah
Outstanding Iowa Water


Clear Lake – OIW?

Tiers of Anti-deg

- Tier 3 – Outstanding National Resource Waters
  - Quality must be maintained, degradation prohibited unless temporary and limited
  - Examples:
    - Waters of exceptional recreational or ecological importance
    - National Parks, State Parks, Wildlife Refuges
    - None are proposed in these rules
    - Nomination procedures

A regulated discharge shall not be considered to result in degradation, if . . .

- The proposed net increase in the discharge of a pollutant of concern does not result in an increase in potential mass loading or an increase in the ambient water quality concentration of the receiving water after mixing
- The activity will result in only temporary and limited degradation of water quality as defined
- A permit for an existing facility does not propose less stringent permit limits
- Additional treatment of an existing discharge if the facility retains their current permit limits

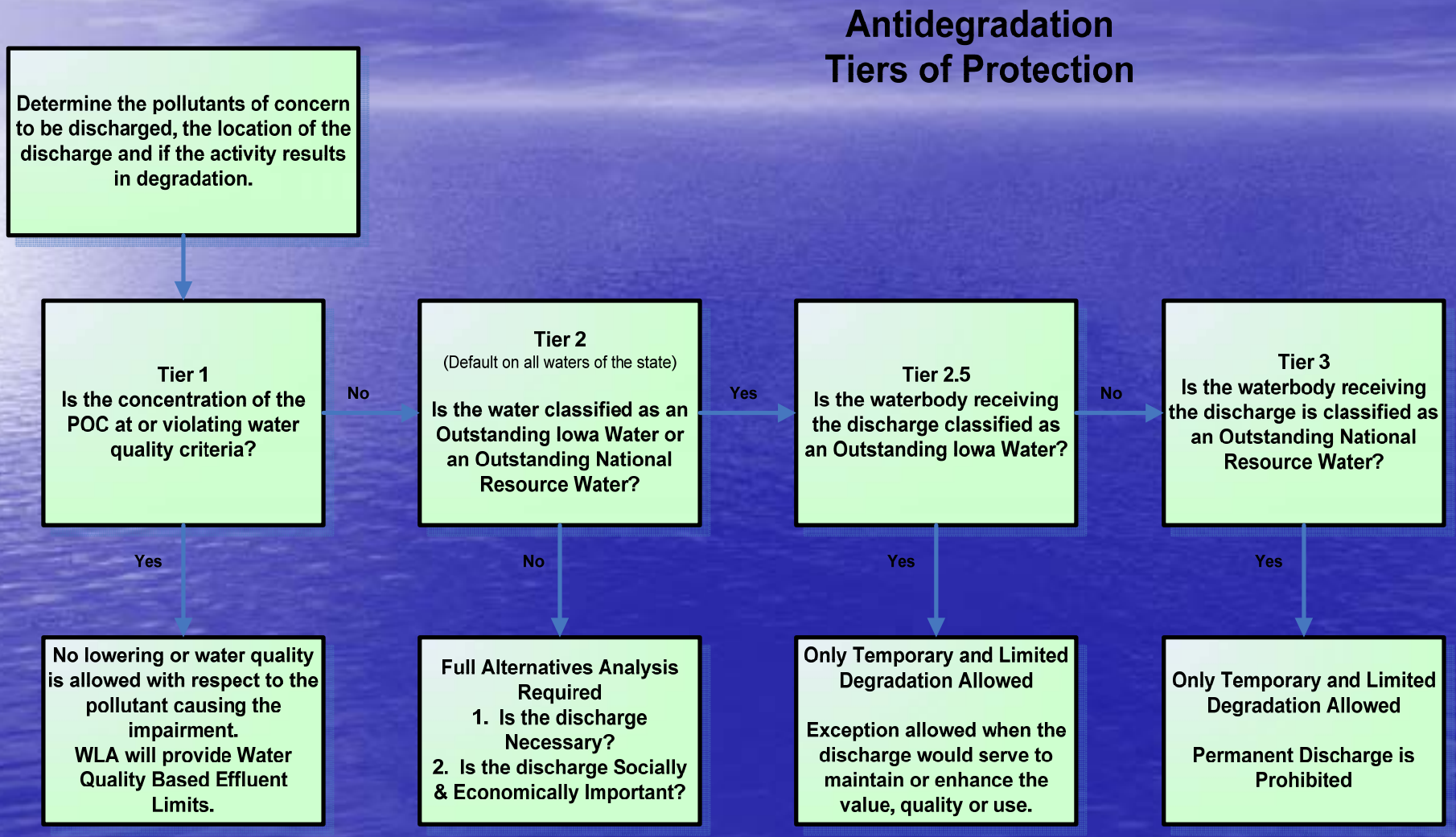
A regulated discharge shall not be considered to result in degradation, if . . .

- Treatment is added to a previously unpermitted discharge
- Combined and sanitary sewer overflows (CSOs and SSOs) control projects resulting in a net decrease in the CSO/SSO related pollutant loadings to surface waters
- The department concludes that the proposed activity will not cause degradation based upon the specifics of any watershed-based trading that has been agreed to by the project applicant.

Temporary & Limited Degradation

- Receives a Tier 1 Review
  - Length of time water quality will be lowered
  - Percent change in ambient conditions
  - Parameters affected
  - Likelihood for long-term water quality benefits
  - Degree to which achieving WQS during the activity will be at risk
  - Potential for any residual long-term influences

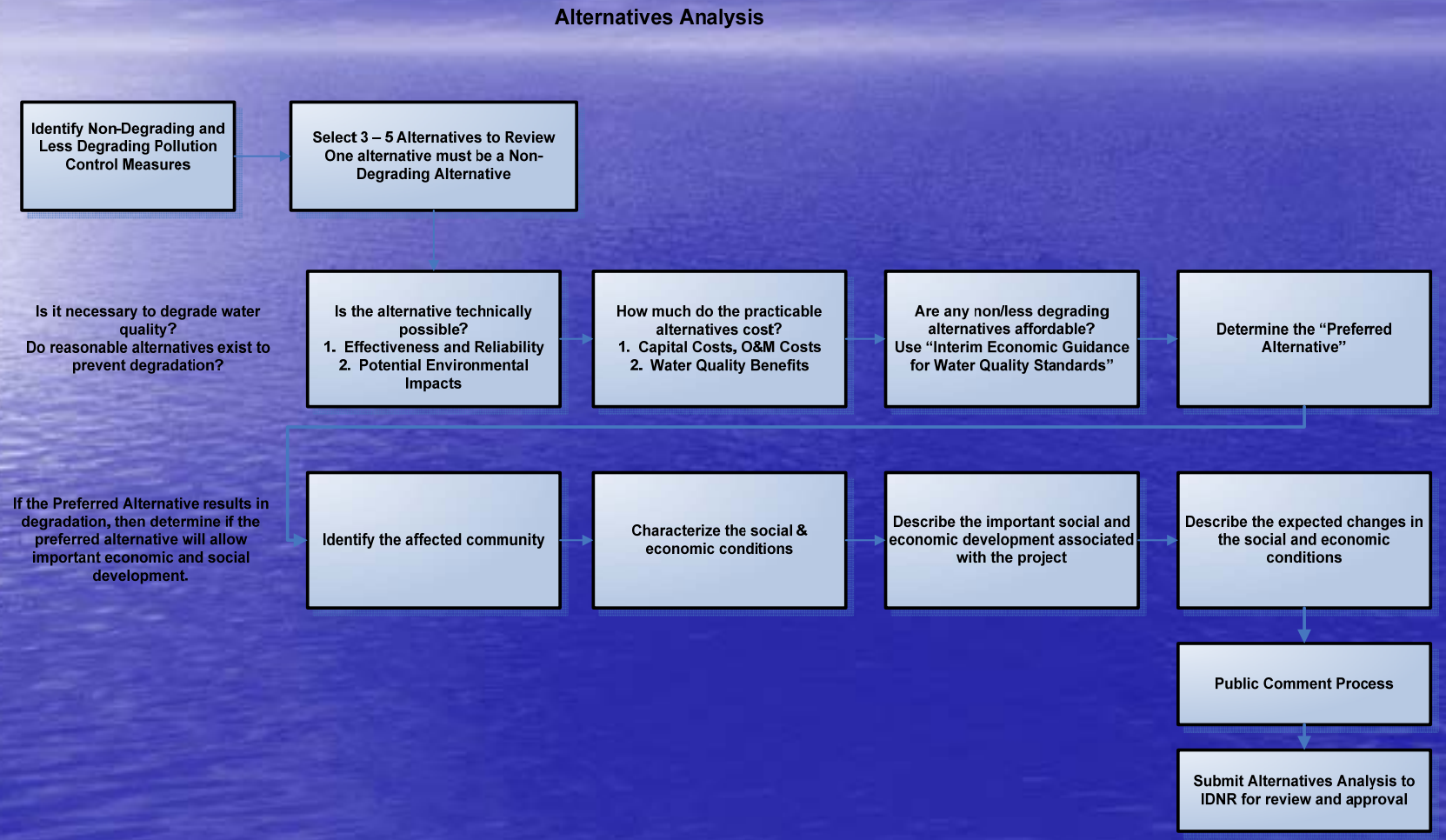
Alternatives Analysis

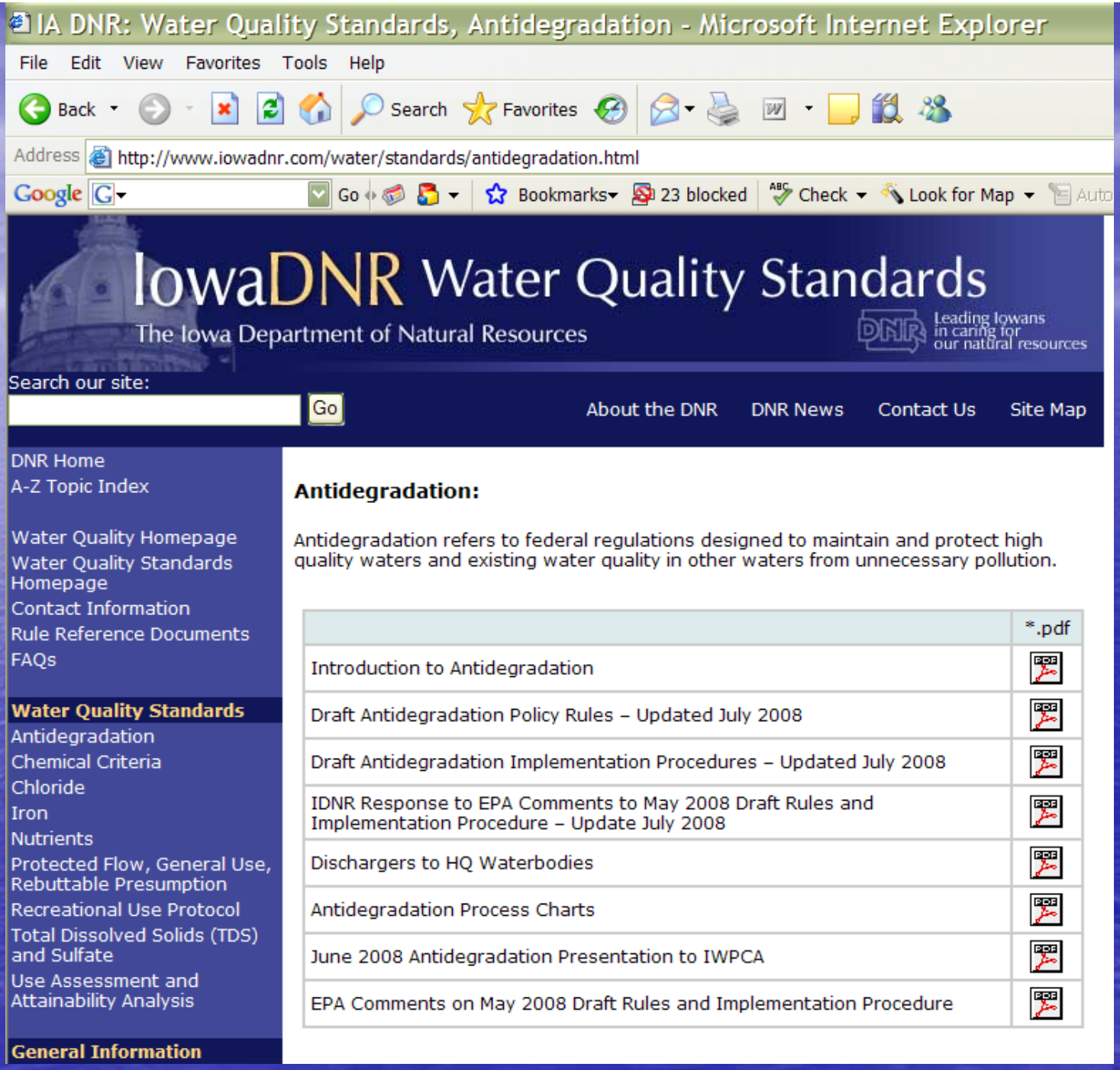


Alternatives Analysis

- Non-Degrading and Less Degrading Pollution Control Measures
  - Land application
  - Subsurface irrigation
  - Waste transport
  - Groundwater recharge
  - Improvements in the collection system
  - Recycling or reuse
  - Discharge to a regional wastewater collection and treatment system
  - Seasonal or controlled discharges to avoid critical water quality periods

Alternatives Analysis

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Chemical Criteria
Chloride
Iron
Nutrients
Protected Flow, General Use, Rebuttable Presumption
Recreational Use Protocol
Total Dissolved Solids (TDS) and Sulfate
Use Assessment and Attainability Analysis
General Information
Antidegradation:
Antidegradation refers to federal regulations designed to maintain and protect high quality waters and existing water quality in other waters from unnecessary pollution.
*.pdf
Introduction to Antidegradation
Draft Antidegradation Policy Rules – Updated July 2008
Draft Antidegradation Implementation Procedures – Updated July 2008
IDNR Response to EPA Comments to May 2008 Draft Rules and Implementation Procedure – Update July 2008
Dischargers to HQ Waterbodies
Antidegradation Process Charts
June 2008 Antidegradation Presentation to IWPCA
EPA Comments on May 2008 Draft Rules and Implementation Procedure

Timeline

- July 1 – DNR sends consultation package to EPA
- July 8 – EPC Meeting
- **July/August - Open Meetings**
- Aug 11 – EPA responds to consultation package
- Sep 9 – EPC meeting to initiate rule making


Questions?